About Us

Eissa Fiberglass LLC is a UAE-based, full-service manufacturer, supplier, and installer of advanced **GRP, FRP, and GRE composite solutions**, delivering engineered products for critical infrastructure and industrial applications since 2007.

With nearly two decades of proven experience, we have established ourselves as a reliable partner for major projects across the UAE, particularly in **sewage and water treatment, power generation, and desalination sectors**. Our work aligns with the stringent requirements of leading authorities such as Etihad, DEWA, and FEWA, reflecting our commitment to compliance, quality, and performance.

Core Capabilities

Eissa Fiberglass LLC offers **end-to-end project execution**, covering:

- Engineering design and technical consultation
- Custom fabrication and manufacturing
- Supply and logistics management
- On-site installation and project execution
- Inspection, testing, and after-sales support

Our integrated approach ensures seamless coordination, reduced project risks, and consistent delivery standards across all phases.

Infrastructure & Presence

Headquartered in Ajman, with operational branches in Umm Al Quwain, Abu Dhabi, and Dubai, we maintain a strong regional presence to support fast-track and large-scale projects. Our **fully equipped production facility in Umm Al Quwain** is designed to handle high-volume fabrication and specialized custom-built solutions, ensuring efficiency, scalability, and precision.

Quality & Engineering Excellence

Quality is embedded in every aspect of our operations. We utilize advanced composite manufacturing technologies and adhere to rigorous

quality control procedures to ensure that our products meet international standards for **strength, durability, and environmental resistance**.

Our team of qualified engineers, skilled technicians, and experienced project managers brings deep industry knowledge and technical expertise, enabling us to deliver solutions that perform reliably under demanding operating conditions.

Client-Centric Approach

We are committed to building long-term partnerships through transparency, responsiveness, and consistent performance. By understanding project-specific requirements, we deliver **cost-effective, customized solutions** without compromising on quality or timelines.

Our approach is defined by:

- Strong technical support
- Competitive commercial structuring
- Timely project execution
- Reliable after-sales service

Vision

To be a recognized industry leader in GRP, FRP, and GRE solutions across the UAE and the wider region, setting benchmarks in **engineering excellence, innovation, and sustainable manufacturing**.

Mission

To deliver high-quality, engineered composite solutions through **advanced technology, skilled workmanship, and a customer-focused approach**, ensuring safety, reliability, and long-term value for every project.

EISSA
FIBER GLASS L.L.C.

PRODUCTS

- GRP/GRE/GRV TANKS
  - WATER TANK
  - CHEMICAL TANK
  - DIESEL TANK
  - FILAMENT WINDING TANK
  - SEWAGE TANK
- GRP PANEL TANK
  - HOT PRESS PANEL TANK
  - COLD PRESS PANEL TANK
- GRP STRUCTURAL PROFILES
  - GRP GRATING
  - GRP HANDRAIL
  - GRP PLATFORM
  - GRP LADDER
  - GRP MULTIFLO COVER & BAFFLE WALL
- GRP PIPING SYSTEM
  - GRP/GRE PIPE SYSTEM
  - GRP LAMINATION
  - GRP FLANGE AND FITTING
- GRP WATER PROOFING SYSTEM
  - GRP/GRE LINING
- GRP CUSTOMISED ITEMS
  - GRP KIOSK
  - GRP MANHOLE COVER
  - GRP COVER
  - GRP CANOPY
  - GRP CAR SHED
- GRP INFRASTRUCTURE
  - GRP LINER
  - GRP SHUTTER MOLD

+97167319660
+97142875676
www.eissafiber.com
www.eissafiber.ae
info@eissafiber.com
Abu Dhabi, Dubai, Ajman, Umm Al Quwain

• GRE/GRP/GRV TANKS

- Eissa Fiberglass GRP Tanks provide an ideal solution for water storage in all types of environments. Designed with advanced features, these tanks offer excellent resistance to UV radiation, ensure leak-proof performance, and help maintain water temperature, preventing freezing in extreme conditions.

- Manufactured using high-quality Glass Reinforced Plastic (GRP), these tanks are durable, cost-effective, and hygienic, making them a reliable choice for safe water storage. Their lightweight yet robust construction allows them to withstand harsh outdoor conditions with ease.
- GRP tanks are produced using the SMC (Sheet Moulding Compound) process, ensuring consistent quality and structural strength. They are available in both horizontal and vertical configurations and can be customized with a wide range of platforms, flanges, and fittings to suit specific functional requirements.

- We offer a wide range of GRP / GRE / GRV tanks designed for various applications, including:
- Water Tanks
- Chemical Storage Tanks
- Diesel Storage Tanks
- Filament Wound Tank
- Sewage Tank

- **GRP WATER TANKS**

- Glass Reinforced Plastic (GRP) water tanks are widely recognized as a reliable and hygienic solution for potable water storage. These tanks have been extensively tested and certified for safe contact with drinking water, ensuring that water is stored under optimal conditions while maintaining the highest quality standards.

- **TYPES OF GRP WATER TANKS**

- **GRP Horizontal Cylindrical Tanks**

- Suitable for installation on rooftops, platforms, or ground level
- Stable design for locations with height restrictions

2.GRP Vertical Cylindrical Tanks

- Ideal for areas with limited ground space
- Designed for gravity-based water distribution

MANUFACTURING SPECIFICATIONS

Our Manufacturing process follows advanced international manufacturing guidelines to ensure every tank meets the highest industry expectations.

- **Gelcoat Thickness**: 0.5mm thick gelcoat layer for chemical resistance with standard white color (custom colors available on request).
- **Resin content**: 60–70% resin content for chopped strand mat for enhanced reinforcement.
- **Resin Content**: 45–55% resin content for woven roving layers for improved structural strength and rigidity.
- **Surface Mat**: E-glass surface mat (450 g/m²) with ~90% resin content for corrosion protection.
- **Structural Layers**: 1 mm thick gelcoat interior finishing with protective surface mat. Multiple layers of fiber-mat and woven roving for strength. Waxed cover coat for a clean, smooth finish.
- **External Coating**: UV-resistant polyester resin topcoat with wax finishing for durability and smooth appearance.
- **Chemical Resistant Barrier**: Vinyl ester resin layer with fiberglass reinforcement for additional chemical resistance.
- **Joint Construction**: GRP putty and chopped strand mat reinforced with gelcoat for leak-proof joints.

- **Fittings & Accessories**: Standard provisions for inlet, outlet, overflow, drain, vent, and manholes Connectors provided upon request.

Available Capacities

Horizontal Cylindrical Water Tank

The tanks are available in a wide range of capacities in US GALLONS to suit various project requirements.

500 USG	800USG	1000 USG	1500 USG	2000USG	3000 USG
5000USG	10000 USG	12000 USG	15000 USG	20,000USG	

Vertical cylindrical water Tank

500 USG	800 USG	1000 USG	1200 USG	1500 USG
2000 USG	3000 USG	5000 USG	OTHER SIZES AVAILABLE UPON REQUEST	

BENEFITS

- **Highly Durable**: Built with reinforced fiberglass layers and high strength resin, providing excellent strength and mechanical stability.
- **Versatile Installation**: Suitable for underground and above-ground use.
- **Hygienic water storage**: The tanks are manufactured with food-grade polyester resin, ensuring safe and hygienic storage of potable water. The smooth internal surface prevents the growth of algae, bacteria, and fungus, maintaining water quality.
- **Flexible Design and Capacity**: These tanks are manufactured in various sizes and shapes, and capacities to suit different storage applications.
- **Low Maintenance**: The non-corrosive and smooth internal surface minimize the accumulation of dirt and algae, reducing the need for frequent cleaning and maintenance.

APPLICATIONS

- The tanks can be installed underground for space-saving water storage solutions in urban infrastructure projects.
- GRP tanks are often used as reserve tanks for fire protection and emergency water supply systems.

- These tanks are ideal for storing potable water in residential complexes, villas, and housing projects.
- Factories and industrial facilities utilize these tanks for processing water, chemical storage, and utility water systems.

Our GRP cylindrical water tanks are designed to meet modern infrastructure demands, offering excellent durability, hygienic water storage, and long-lasting performance even in challenging environmental conditions

❖ GRP CHEMICAL TANK

GRP chemical storage tanks manufactured by us are well known for their excellent mechanical strength, durability, and long service life. Our company specializes in designing and manufacturing storage tanks and vessels that are ideally suited for handling aggressive and corrosive chemicals, even in the most demanding environments.
These tanks are made from high-quality Glass Reinforced Plastic (GRP), offering outstanding resistance to corrosion, ensuring leak-proof performance, and requiring minimal maintenance. Their robust construction makes them highly reliable for industrial applications.

❖ GRP DIESEL TANk

Diesel storage tanks play a crucial role in safely holding and dispensing fuel across industrial, commercial, and transportation sectors. Modern tanks are engineered with durability and environmental protection in mind, often incorporating advanced materials such as fiberglass-reinforced plastic (FRP). Depending on project requirements, diesel tanks can be manufactured in vertical or horizontal configurations, as well as cylindrical or rectangular shapes. Advanced designs often include double-wall construction with interstitial leak detection systems, ensuring maximum safety and compliance, especially for underground installations such as fuel stations.
Today's diesel tanks are not only built for strength but also for adaptability. We can customize tanks with insulation, rubber linings, manways, and mounting options to suit specific applications. Underground diesel tanks often feature double-wall construction with an interstitial

leak-detection chamber, providing an added layer of safety and early warning in case of breaches.

❖ GRP SEWAGE TANK

GRP Sewage Tanks are advanced storage solutions designed for the safe collection, storage, and management of wastewater and sewage. Manufactured using Glass Reinforced Plastic (GRP), these tanks offer excellent resistance to corrosion, chemicals, and harsh environmental conditions typically found in sewage systems.
A key advantage of GRP sewage tanks is their ability to safeguard the surrounding environment. The seamless, non-porous construction prevents leakage, ensuring that wastewater does not contaminate soil or groundwater. Many GRP tanks are designed with double-wall configurations or integrated leak-detection systems, adding an extra layer of safety for underground installations. They are available in capacities ranging from 1000 to 20,000 US gallons
. They are available in various shapes, capacities, and internal configurations, including baffled chambers, inspection manways, and ventilation options

❖ GRP FILAMENT WINDING TANK

Filament Winding Tanks are high-performance storage solutions manufactured using an advanced automated process known as filament winding. Manufactured by winding continuous glass fibers around a rotating mandrel, these tanks achieve exceptional strength-to-weight ratios that outperform many traditional materials. The controlled winding process ensures uniform structural integrity, making the tanks highly reliable for storing water, chemicals, fuels, and industrial liquids.

One of the standout advantages of filament winding tanks is their resistance to corrosion, chemical attack, and environmental degradation. Unlike steel tanks that may rust or concrete tanks that can crack over time, filament-wound GRP/FRP tanks maintain their performance even under harsh conditions. Their seamless construction minimizes leakage risks, while the reinforced composite layers provide excellent protection against internal pressure and external loads. This makes them ideal for both above-ground and under-ground applications

where longevity and safety are essential.

GRP / Panel Water Tank

Glass Reinforced Plastic (GRP) Panel Tanks are modular water storage solutions designed for durability, hygiene, and ease of installation. Manufactured using high-quality SMC panels, these tanks are ideal for potable water, fire-fighting systems, and industrial applications.

Panel Classification

Hot Pressed Panels

Hot pressed panels are manufactured under high temperature and pressure using advanced moulding technology.
Features:

- High mechanical strength
- Smooth internal & external finish
- Uniform thickness and density
- Excellent resistance to corrosion and UV
- Long service life
- Leak-proof joint system

Cold Pressed Panels

Cold pressed panels are manufactured under controlled conditions to ensure consistent quality and performance.
Features:

- High mechanical strength
- Smooth internal & external finish
- Uniform thickness and density
- Excellent resistance to corrosion and UV
- Long service life
- Leak-proof joint system

Panel Specifications

- Panel Material: GRP / SMC reinforced composite
- Panel Thickness: 8 mm – 16 mm depending on tank height

- Panel Size: Typically 1m × 1m or 1m × 0.5m modular panels
- Tank Height Options: 1m – 5m (customizable)
- Temperature Resistance: Up to 55°C
- Sealant: Food-grade waterproof sealing material

Tank features

- Hygienic & suitable for potable water storage
- Corrosion-resistant (no rust formation)
- UV stabilized for outdoor installation
- Leak-proof sealing with EPDM gaskets

Tank Components

- GRP Panels
- Internal & External Reinforcement
- Hot dip galvanized / SS support structure
- Bolts, nuts (SS 304 / HDG)
- EPDM sealing gaskets
- Access manhole with cover
- Ladder (internal & external – optional)
- Level indicator (optional)
- Inlet, outlet, overflow, drain nozzles

GRP Structural Profiles

GRP structural Profiles are advanced composite structural components Manufactured using the pultrusion process, ensuring consistent quality and high mechanical strength. Where glass Fibers are combined with high – performance resin and pulled through a heated die to form strong, lightweight profiles. They are corrosion-resistant, non-conductive, and designed to perform in harsh industrial environments. GRP profiles offer a long-lasting alternative to steel, aluminum, and wood.

RESIN SYSTEM

The Resin system is the core binding material that holds the glass Fibers together and gives GRP pultruded profiles their strength, durability as a standard, to fulfil special requirements the following types are applied.

- **GP Resin**: GP resin is a higher-grade polyester resin offering Moderate strength, durability, and corrosion resistance
- **Vinyl Ester Resin**: Vinyl ester resin is the premium choice for maximum corrosion resistance and mechanical performance.

MANUFACTURING METHODOLOGY – PULTRUSION

- **Fiber Reinforcement Feeding**: The process begins with high -quality glass fiber reinforcements Continuous fiberglass rovings, mats, and stitched fabrics are drawn from creels. These Fibers are carefully arranged and aligned to achieve the required strength.
- **Resin impregnation:** The Fibers are then passed through a specially formulated thermosetting resin bath or injection chamber. Becoming fully saturated with a mixture of resin, fillers and pigments
- **Pre -forming:** The resin-soaked Fibers move through preforming guides that shape and align them into the desired profile geometry.
- **Heating & curing:** The shaped material passes through a heated steel die, as they pass through, the resin cures (hardens) under

controlled temperature and pressure, transforming the material into a solid, rigid composite profile.

- **Continuous pulling:** A mechanical pulling system continuously pulls the cured profile through the die; this step gives GRP pultruded profiles their consistent quality and structural strength.
- **Cutting & Finishing:** The cured profile exits the die and is cut to the required lengths Final finishing, quality checks, and surface treatments are applied to meet customer specifications.

TYPES OF GRP PULTRUDED PROFILES

GRP pultruded profiles are available in a wide range of structural shapes to meet different engineering requirements, including:

- C- Channels
- I – Beam
- H- Beam
- Square Tube
- L - Angle
- GRP nut c Bolts

KEY FEATURES OF GRP STRUCTURAL PROFILES

- High strength to weight ratio for structural Stability
- Excellent Corrosion and chemical resistance
- Non – conductive and non -magnetic properties
- Flexible Design options

VARIOUS PROPERTIES OF GRP PULTRUDED STRUCTURAL PROFILES

Mechanical Properties	ASTM Test	Units	Polyester Resin	Vinylester resin
Tensile strength,LW	D – 638	N/MM²	206.8	206.8
Tensile strength,CW	D – 638	N/MM²	48.2	48.2
Tensile modulus,LW	D – 638	KN/MM²	17.2	17.9
Tensile modulus,CW	D – 638	KN/MM²	5.5	5.5
Compressive strength,LW	D – 695	N/mm²	206.8	206.8
Compressive strength,CW	D – 695	N/mm²	103.4	110.3
Compressive modulus,LW	D – 695	KN/mm²	17.2	17.9
Compressive modulus,CW	D – 695	KN/mm²	6.9	6.9
Flexural Strength,LW	D – 790	N/mm²	206.8	206.8

Flexural Strength,CW	D – 790	N/mm²	68.9	68.9
Flexural Modulus,LW	D-790	KN/mm²	11	11
Flexural Modulus,CW	D-790	KN/mm²	5.5	5.5
Modulus of Elasticity	Full Section	KN/mm²	17.9	19.3
Modulus of Elasticity,E W&I Shape>4	Full Section	KN/mm²	17.2	17.2
Shear Modulus(LW)	Full Section	KN/mm²	2.9	2.9
Short Beam Shear(LW)	D-2344	N/mm²	31	31
Notched Izod Impact,LW	D-256	J/MM	1.28	1.28
Notched Izod Impact,CW	D-256	J/MM	0.2	0.2
Poisson Ratio(LW)	D - 3039	mm/mm	0.33	0.33
Glass Content	D-2584	%	Min 55	Min 55
Physical Properties	**ASTM Test**	**Units**	**Polyester Resin**	**Vinylester resin**
Barcol Hardness	D - 2583		45	45
Water Absorption	D – 570	% Max by wt.	0.6	0.6
Density	D – 792	g/cc	1.72-1.95	1.72-1.94

Flammability Properties	ASTM Test	Units	Polyester Resin	Vinylester resin
Flammability classification	UL94	-	V-0	V-0
Tunnel Test	E-84	-	FSI<25	FSI<25
Flammability Exitinguishing	D-635	-	Flame spread 25 max	Flame spread 25 max

LW-lengthwise CW-crosswise PF-perpendicular to laminate face

FRP/GRP GRATINGS MOLDED & PULTRUDED

Eissa offers Pultruded as well as Molded Gratings

Molded Grating:

Installation around piping, tanks and other obstacles is much simpler with molded grating

Fixed panels sizes to be fitted on site.
The chemical resistance of molded grating is superior.
Well suited for forklift traffic.
Designed for a max deflection of SPAN/100

Pultruded Grating:
Used where mechanical load is very high or support distances are very wide.
Panels are fabricated to draw with minimum wastage.
Performs structurally better than molded grating with a maximum deflection to be limited SPAN/200(the same limit as for steel grating)

FIBERGLASS MOLDED GRATINGS

Eissa Fiber Glass is one of the UAE's leading producers of molded grating.
Key Advantages:

- Corrosion resistant
- Lightweight, easy to install
- High load-bearing capacity
- Low maintenance and long service life when compare with steel
- Electrically non-conductive (good for electrical safety)
-

Available with:
Polyester resin- Unsaturated polyester resins are the most used for the composites industry. Polyester resins have a good balance of mechanical, electrical and chemical properties.

Vinyl ester resin- Vinyl ester resins combine the best features of polyester- and epoxy resins. The strength is good and the resin has a very good chemical resistance in acids and alkalis environments, especially at high temperatures.

Grating Surface provides with 4 anti-slip surface

- Concave/Meniscus Top
- Grit Top
- Chequered Plate Top
- Covered Grit Top

Product Code	Height (MM)	Mesh Size (MM)	Rib Thickness (MM)	Open Area (%)	Sheet Size (MM)
EFG 12 X (50 X 50)	12.5	50 X 50	6-5	82	1007 X 2007, 1007 X 4047
EFG 25 X (38 X 38)	25	38 X 38	7-5	69	1220 X 3660, 1007 X 2007, 1007 X 4047, 1247 x 4047
EFG 25 X (25 X 100)	25	25 X 100	6.35	68	1220 X 3660
EFG 30 X (38 X 38)	30	38 X 38	7-5	68	1007 X 2007, 1007 X 4047, 1220 x 4045, 1220 x 3660
EFG 38 X (38 X 38)	38	38 X 38	7-5	68	1220 X 3660, 1007 X 2007, 1007 X 4047, 1247 x 4047
EFG 50 X (50 X 50)	50	50 X 50	8-6	78	1220 x 4068
EFG 30 X (20 X 20)	30	20 X 20 (Mini)	7-5	42	2003 X 740

FEATURES OF FRP MATERIAL

- Corrosion And Chemical Resistance
- High Strength To Weight Ratio
- Electric And Thermal Non-Conductive
- EMI/RFI Transparent
- Less Environmental Impact
- Long Life Cycle
- Superior Ergonomics

RESIN SYSTEM FOR GRATINGS

Resin Type	Resin Base	Description	Flame spread rating ASTM E84
Type IFR	Isopthalic Polyester	Industrial Grade Corrosion resistance & fire retardant	Class 1, 25 or less
Type I	Isopthalic Polyester	Industrial Grade Corrosion resistance in acidic environment	Non fire retardant
Type V	Vinyl Ester	Superior Corrosion resistance & fire retardant	Class 1, 25 or less

Type P	Phenolic	Low smoke and superior fire retardant	Class 1, 5 or less

COMPARISON WITH CONVENTIONAL MATERIAL

	EISSA GRP/FRP	Steel	Aluminium	Timber
Corrosion Resistance	**High**	Low	Medium	Low
Strength	**High**	High	High	Low
Weight	**Low**	High	Low	Medium
Electrical Conductivity	**Low**	High	High	Moderate
Thermal Conductivity	**Very Low**	High	High	Low
EMI/RFI Transparency	**Yes**	No	No	Yes
Fabrication	**Easy**	Easy	Moderate	Easy
Life Cycle Cost	**Low**	Moderate	Moderate	High
Environmental Impact	**Low**	High	High	Low

FIBER GLASS PULTRUDED GRATING

Eissa Pultruded Gratings are renowned for their high strength, corrosion resistance, long service life, and safety, even in the most demanding environments. They comply with the highest international quality standards, ensuring reliable and durable performance.

The Eissa design system utilizes interlocking pultruded profiles, which provide excellent structural integrity and stability. This innovative construction allows the gratings to deliver reliable service for many years, consistently outperforming traditional materials such as steel and aluminium in corrosive and harsh industrial conditions.

Bearing Bras and Cross rod Assemblies
Unlike molded grating which has equal strength in both directions Eissa Pultruded grating is stronger in the longitudinal direction as it is fabricated from bearing bars an interlocking rod

FIBERGLASS PULTRUDED GRATING

Industrial Grating Nomenclature and Standard Sizes

I-Bar Assemblies

- Offered in standard open areas of 40%, 50%, and 60%.
- Bearing bar style: I.

T-Bar Assemblies

- Offered in standard open areas of 17%, 33%, and 50%.
- Bearing bar style: T.

Nomenclature Explanation

The naming convention for industrial grating indicates:

1. Bearing bar style – either I or T
2. Open area percentage
3. Metric depth of the grating

Example:

- I1560 → I-bearing bar, 60% open area, 38 mm deep
- T1033 → T-bearing bar, 33% open area, 25 mm deep

	H- Height	W- Top Width	C- Spacing	Open Area
I-1040	25	15	25	40%
I-1050	25	15	30	50%
I-1060	25	15	38	60%
I-1240	30	15	25	40%
I-1260	30	15	38	60%
I-1540	38	15	25	40%
I-1550	38	15	30	50%
I-1560	38	15	38	60%
T-1033	25	25	38	33%
T-1050	25	25	50.8	50%
T-1517	38	25	30.5	17%
T-1533	38	25	38	33%
T-1550	38	25	50.8	50%
T-2033	50	25	38	33%
T-2050	50	25	50.8	50%

For Customized size and loading standards please contact our sales team.

+97167319660
+97142875676
www.eissafiber.com
www.eissafiber.ae
info@eissafiber.com
Abu Dhabi, Dubai, Ajman, Umm Al Quwain

Pultruded Grating of Height 30mm50mm, &Custom Height also available on request.

GRP LADDER

A grp pultruded ladder system is a high – performance, corrosion – resistant access solution engineered for industrial environments where safety, durability and long -term reliability is essential. They are manufactured using advanced pultrusion technology, their modular design allows easy installation in facilities such as water treatment plants, chemical industries, marine environments.

KEY FEATURES

- **Corrosion & chemical resistance**: grp ladders are highly resistant to chemicals, moisture,
- **Electrically non – conductive**: they are electrically non – conductive so they are suitable for electrical substations & power plants with zero risk of electrical conduction.
- **Slip - resistance design:** GRP ladder rungs are designed with anti -slip surfaces this enhance worker safety in hazardous environment. Also provide optional safety cages, platforms, and mounting brackets.
- **Low maintenance**: unlike metal ladders they didn't require frequent painting, coating or galvanizing thus maintaining the performance for long years
- **UV & weather resistance**: uv – stabilized resin ensures long outdoor service life, and it performs reliably in extreme temperatures.

APPLICATIONS

- Suitable for wastewater treatment plants and desalination plants where corrosion resistance is essential.
- Ideal for oil and gas facilities, chemical plants, for safe vertical access.
- Saltwater corrosion resistance makes them perform exceptionally well in marine environment
- The non – conductive nature makes these ladders suitable for electrical and power generation facilities.

❖ GRP HANDRAIL

Grp handrail is modular safety systems made from a composite of fiberglass strands and resin. They are durable, corrosion – resistant safety systems designed to provide reliable support and protection in industrial, commercial and infrastructure environments. These handrails offer exceptional strength, long service life, and superior resistance to chemicals, moisture, and UV exposure.

ADVANTAGES

- **High strength – to – weight ratio**: it is approximately one – fourth the weight of steel while maintaining comparable structural strength, simplifying transportation and installation
- **UV & weather resistant**: grp handrails can withstand UV exposure, resistant to extreme temperatures and harsh climates. Ensures long -term outdoor performance.
- **Corrosion resistance**: withstands exposure to acids, alkalis, saltwater, and industrial chemical perfect for wastewater plants, marine environments, and chemical processing areas.
- **Modular & customizable**: grp handrails are easy to assemble with modular components and available in various colors, sizes, and configurations.
- **Electrically non – conductive**: it provides electrical and thermal insulation that makes these handrails ideal for high-voltage areas.

APPLICATIONS

- **Water & wastewater treatment**: due to the high resistance to moisture, constant chemical exposure is ideal for water and wastewater treatment plants.
- **Walkways & platforms**: used on walkways, bridges staircases and elevated platforms to improve safety and structural reliability.
- **Marine and offshore industries:** GRP handrails perform well in saltwater environments such as offshore platforms, coastal infrastructure, marine vessels.

- **Public infrastructure & commercial spaces**: GRP handrail systems are increasingly used in architecture for their aesthetic flexibility

❖ GRP PLATFORM

GRP platforms are manufactured using high -quality fiberglass reinforced with durable resins, GRP platforms offer Excellent structural performance while maintaining a low weight compared to traditional steel platforms. Unlike steel platforms, GRP platforms do not rust, require minimal maintenance, and remain stable even in harsh outdoor or corrosive environments.

KEY FEATURES

- **Slip resistance surface**: GRP grating platforms provide excellent anti-slip performance Ideal for wet, oily, or high-traffic industrial areas.
- **Superior corrosion protection**: it can perform exceptionally well in corrosive environments and is resistant to acids, alkalis and saltwater and industrial chemicals.
- **Optimized Strength for Lightweight Applications**: Stronger than many metals while being significantly lighter Easy to transport, install, and assemble without heavy machinery.
- **Scalable and Fully Customizable Configuration**: The modular design Available in various sizes, colors, thicknesses, and load ratings. Compatible with handrails, ladders, staircases, and support structures.

APPLICATIONS

- GRP platforms are ideal for clarifiers, aeration tanks, chemical dosing areas, and pump rooms. Their corrosion resistance ensures long-term performance in wet and chemical-rich environments

- GRP platforms are widely used for cooling tower access, rooftop maintenance, and industrial machinery platforms due to their lightweight and corrosion-resistant properties.

- Used in pedestrian walkways, inspection platforms, drainage areas, and utility access points where long-term durability is essential.

- GRP is non-conductive, it is ideal for elevated walkways, maintenance platforms, and access structures in high-voltage areas.

- in industrial zones where equipment is constantly exposed to aggressive chemicals, their inherent resistance to acids, alkalis, ensures long-term structural integrity without rusting makes GRP platforms a reliable choice for chemical plants, refineries, and petrochemical processing units

❖ GRP MULTIFLO COVER &BAFFLEWALL

Multiflo cover and Baffle Wall systems are essential components in modern water treatment and storage infrastructure. These engineered structures are designed to control the movement of water within tanks, ensuring proper distribution, effective sediment settling, and enhanced treatment performance. Multiflo cover systems typically act as protective covers that support controlled water flow and protect treatment units, while baffle walls are vertical partitions installed inside tanks or reservoirs to guide the water flow path.

FEATURES & CONSTRUCTION STANDARD

- Manufactured using high-quality GRP composite materials for strength and longevity.
- UV-stabilized to withstand outdoor exposure.
- Smooth internal surfaces to prevent algae and sediment buildup.
- Modular panel design for easy transportation and installation.
- Customizable thickness, height, and reinforcement based on project requirements.
- Compatible with both vertical and horizontal tank configurations.

APPLICATIONS

- Desalination plants
- Wastewater treatment facilities
- Water treatment plants (flocculation, sedimentation, filtration chambers)
- Reservoirs and large-capacity storage units

GRP /GRE PIPE SYSTEM

Glass Reinforced Plastic (GRP) and Glass Reinforced Epoxy (GRE) pipe systems are advanced composite piping solutions engineered for long-term performance in demanding environments. Manufactured using the Helical Filament Winding Method, these pipes offer exceptional strength, corrosion resistance, and hydraulic efficiency.
GRP/GRE pipes are designed to handle a wide range of fluids, including water, chemicals, and wastewater, while offering excellent resistance to corrosion and environmental conditions. Compared to traditional piping materials such as steel or concrete, these systems provide superior longevity, lower maintenance, and high performance

MANUFACTURING PROCESS

The original & the most extensively used method of manufacturing GRP pipes is the HELICAL FILAMENT WINDING METHOD.

Mandrel preparation: First of the mandrel must be cleaned & polished, on which a thin film is wrapped around the mandrel for better inner surface so that the pipe could be released easily& smoothly from mandrel.
Liner preparation & curing: First we apply a layer of resin on film, followed by multiple layers of appropriate resin along with glass surface mat & chopped strand mat and leave for curing.

Filament winding the structural of the pipe: Helical winding –continuous strands of closely spaced Glass Fibers, automatically impregnated with appropriate resin, are wound onto the cured liner by the computer-controlled machine. The pre-programmed machine will be carried out the winding pattern to the weather condition.

Curing the pipe: After completing the filament winding process, mandrel is being put for curing up to 1 to 2 hr. depending on the weather condition.
5. Extraction of the pipe from mandrel: After checking the cured pipe by barcol hardness tester, the pipe is released from mandrel by hydraulic extraction machine.
6. Final outer layer: After removing the pipe from mandrel, a final layer of resin is applied with U.V. stabilizer (if required)
7. Both Side end preparation: After finishing the final layer with U.V. stabilizer. The rough ends of pipes are cut and calibrated at both ends for coupler jointing or at one end for socket and spigot jointing system and send for hydro testing

SPECIFICATIONS

- **Available Diameters**

From 100 mm to 2600 mm (up to 3000 mm on request). "GRP Pipes are manufactured in following diameters… up to 3200 mm dia."

- **Standard Lengths**

3 m, 5 m, 6 m, 12 m (custom lengths available).

- **Pressure Classes**

PN 0.5 (gravity)
PN 3, 6, 9, 10, 12, 15, 20, 25, 30, 35

- **Stiffness Classes**

SN 1250, SN 2500, SN 5000, SN 10000 "Tangential stiffness (STIS) EI/D depending on customer requirements."

BENEFITS

- **Excellent Hydraulic Performance**: Hazen-Williams C-value of **150–160**, significantly higher than steel (120–130), reducing pumping energy.
- **High Strength-to-Weight Ratio:** Specific strength surpasses iron, steel, HDPE, and PVC.
- **Fatigue Resistance:** Withstands cyclic loading, making it suitable for fluctuating pressure systems.
- **Low Thermal Conductivity:** Minimizes heat loss and often eliminates the need for insulation.

APPLICATONS

- Used for potable water transmission, distribution networks, and irrigation systems.
- Ideal for drainage, sewer lines, and effluent disposal due to their corrosion resistance.
- GRE pipes are widely used for offshore and onshore applications due to their high strength and chemical resistance.
- Used for firewater pipelines due to their durability and reliability.

❖ GRP PIPE LAMINATION

GRP (Glass Reinforced Plastic) pipe lamination is a process used to strengthen, repair, or protect pipelines by applying layers of fiberglass reinforcement combined with resin systems. This method enhances the structural integrity, corrosion resistance, and service life of pipes, especially in aggressive environments.

- **Purpose:** Repair damaged pipes, increase thickness and strength, provide chemical and corrosion resistance, prevent leaks, and extend pipeline lifespan.
- **Materials:** Glass fiber mats (CSM, Woven Roving), vinyl ester or epoxy resin, additives (accelerators, catalysts, pigments), and protective topcoat/gelcoat for UV and chemical resistance.
- **Process:** After cleaning and roughening the pipe surface, a primer/resin coat is applied, followed by fiberglass layers impregnated with resin. Layers are repeated to achieve required thickness, then finished with a protective topcoat and allowed to cure for optimal strength.
- **Advantages:** Corrosion- and chemical-resistant, high strength-to-weight ratio, leak-proof, long-lasting, and suitable for both underground and above-ground applications.

- **Applications:** Water supply and drainage, chemical processing, sewage and wastewater systems, oil & gas, and industrial pipelines.

❖ GRP FLANGE & FITTINGS

- GRP (Glass Reinforced Plastic) flanges and fittings are durable, corrosion-resistant components for piping systems, used to connect, control, and direct fluid flow. Flanges join pipes, valves, and equipment securely, while fittings like elbows, tees, reducers, and couplings modify flow direction and system configuration.
- **Types:**
- **Flanges:** Slip-On, Blind, Threaded, Lap Joint, Custom Fabricated
- **Fittings:** Elbows (45°, 90°), Tees (Equal & Reducing), Reducers (Concentric & Eccentric), Couplings, End Caps
- **Benefits:** Corrosion-resistant, high strength-to-weight ratio, low maintenance, long service life, and thermal/electrical insulation.
- **Applications:** Chemical plants, water/wastewater treatment, oil & gas, marine, power generation, food & beverage, and irrigation systems.

GRP WATER PROOFING SYSTEM

GRP (Glass Reinforced Plastic) Waterproofing System is a high-performance, seamless solution that provides long-lasting water resistance and structural protection. It is created by applying layers of fiberglass reinforcement combined with premium resin systems, forming a strong, joint-free, and completely watertight barrier.
This system effectively prevents leakage, seepage, and moisture penetration, while protecting concrete and steel surfaces from corrosion, chemicals, and environmental damage. Its excellent bonding properties make it suitable for both new construction and refurbishment projects.

Types of GRP Waterproofing Systems:

GRP/GRE Lining – High-performance chemical and corrosion-resistant

lining for industrial and water containment applications.

Key Features:

- Seamless and leak-proof system
- Strong adhesion to concrete and steel surfaces
- High durability with long service life
- UV and weather resistant
- Suitable for complex and irregular surfaces

Applications:
Water Tanks | Roofs & Terraces | Wet Areas | Basements | Manholes | Drainage Channels | Industrial & Chemical Areas
GRP Waterproofing System ensures reliable, long-term protection, making it the ideal choice for modern construction and industrial requirements.

❖ GRP/GRE LAMINATION

GRP / GRE Lamination
Overview:
GRP lamination is a widely used manufacturing and reinforcement process in the fiberglass industry. It involves layering glass fiber mats with specialized resins to create a strong, durable, and corrosion-resistant composite material. This technique is commonly used to manufacture and repair fiberglass products such as tanks, pipes, ducts, structural components, and protective linings.
We specialize in GRP lamination for oil tanks in substations and **GRP manhole lamination**, ensuring high structural integrity and long-lasting performance. For all potable water and industrial applications, we use **WRAS-approved materials**, guaranteeing compliance with international safety and hygiene standards.

Specification of Resin
High-performance resins are selected to deliver optimal mechanical and chemical properties:
Isophthalic Polyester Resin

- High chemical resistance
- Ideal for water tanks and corrosive environments

Vinyl Ester Resin

- Superior corrosion and impact resistance
- Used in industrial, marine, and chemically exposed areas

Lamination Methods

1. Hand Lay-Up

- Traditional manual method
- Fiberglass mats or fabrics are placed on a mold and impregnated with resin using brushes or rollers
- Suitable for complex shapes and small to medium-sized components

2. Spray-Up (Chopper Gun)

- Continuous glass fibers are chopped and sprayed along with resin onto the mold
- Faster than hand lay-up, ideal for large surface areas like tanks and ducts

Benefits

- High corrosion and chemical resistance
- Lightweight with excellent strength
- Customizable shapes and thickness
- Long service life with minimal maintenance

Applications

- Tanks, pipes, ducts, and structural components
- Oil & gas pipelines, chemical plants, and wastewater systems
- Utility and industrial infrastructure

GRP Manhole Lamination

GRP manhole lamination is a **specific application of GRP lamination** tailored for manholes. The process ensures the manhole structure achieves **high strength, corrosion resistance, and durability** while remaining lightweight.

Process:

Resin-saturated fiberglass mats or rovings are layered over a mold and

cured under controlled conditions to form a **monolithic, seamless structure**. The resulting manhole is highly resistant to chemicals, sewage, moisture, and environmental factors, making it ideal for water, sewage, and industrial applications.

Key Advantages:

- High mechanical strength and load-bearing capacity
- Corrosion and chemical resistance for aggressive environments
- Seamless construction reduces leakage risk
- Lightweight and easy to transport and install
- Low maintenance over its service life

Typical Applications:

- Sewer and drainage systems
- Water treatment plants
- Industrial effluent management

GRP CUSTOMISED ITEMS

We offer a range of GRP (Glass Reinforced Plastic) customised products for industrial, commercial, and architectural needs. Made from high-quality fiberglass and resin, they are lightweight, durable, corrosion-resistant, and low-maintenance. Each item is tailored to specific designs and sizes for long-lasting performance.

Our GRP Customised Items Include:

- **GRP Kiosk** – Durable, weather-resistant kiosks for commercial, industrial, and public applications.
- **GRP Manhole Cover** – Lightweight, corrosion-free, and strong covers suitable for drainage and utility access.
- **GRP Canopy** – Stylish, robust canopies for outdoor protection, walkways, and entrances.

- **GRP Car Shed** – Long-lasting, corrosion-resistant car shelters suitable for residential and commercial use.

Key Features: Customisable, corrosion- and weather-resistant, lightweight yet strong, low maintenance, and suitable for indoor and outdoor use.

Applications:
Commercial complexes | Residential areas | Industrial plants | Public infrastructure | Parking and walkways

Our **GRP Customised Items** combine functionality, aesthetics, and durability, making them an ideal choice for modern construction, industrial, and infrastructure projects.

❖ GRP KIOSK

A GRP (Glass Reinforced Plastic) Kiosk is a lightweight, durable, and corrosion-resistant enclosure designed to protect equipment and utilities in outdoor environments. Built to withstand extreme heat, humidity, and corrosive conditions, it is ideal for use across the UAE and Middle East. Available in **insulated, non-insulated, and fire-retardant** variants to suit different project requirements.

Applications:

- ❖ Telecom: Fiber optic hubs, 5G equipment, battery storage
- ❖ Electrical: Substations, LV/HV switchgear, transformer enclosures
- ❖ Oil & Gas: Wellhead panels and instrumentation shelters
- ❖ Commercial: Ticketing booths, retail kiosks

❖ GRP MANHOLE COVER

GRP Manhole Covers are high-strength, corrosion-resistant composite covers designed to protect underground utilities such as drainage lines, sewage networks, water pipelines, and electrical or telecom cables. Built to meet international load standards, they offer superior safety, anti-theft properties, and excellent resistance to weather, chemicals, and heavy

traffic.

TYPES OF MANHOLE COVER

1. **Circular Manhole Cover**
2. **UG (Underground) Manhole Cover**
3. **Square Manhole Cover**
4. **Rectangular Manhole Cover**
5. **Water Gully Cover**
6. **Recessed Cover**
7. **OH Tank Cover (Overhead Tank Cover)**:

APPLICATIONS

- Used in drainage systems, sewer networks, and underground water supply lines.
- Installed in traffic areas where strong and durable covers are required.
- Used in factories, refineries, and chemical plants to protect underground pipelines and service chambers.
- Used in factories, refineries, and chemical plants to protect underground pipelines and service chambers.
- Commonly used in shopping malls, office complexes, and residential developments.

❖ **GRP CANOPY**

Our **GRP (Glass Reinforced Plastic) Canopies** are a durable and aesthetically appealing solution for outdoor protection. Manufactured using high-quality fiberglass and resin systems, GRP canopies are lightweight, corrosion-resistant, and designed to withstand harsh weather conditions.

Key Features:

- Lightweight yet strong and durable
- Corrosion and UV resistant
- Low maintenance with long service life
- Customisable sizes, shapes, and colors
- Easy to install and suitable for complex structures

Applications:

- Walkways and entrances
- Parking shelters

- Residential and commercial buildings
- Industrial and public spaces

❖ GRP CARSHED

Our **GRP (Glass Reinforced Plastic) Car Sheds** provide a strong, durable, and weather-resistant solution for vehicle protection. Made from premium fiberglass and resin systems, these sheds are lightweight, corrosion-free, and require minimal maintenance, ensuring long-lasting performance in any environment.

Key Features:

- Strong and lightweight structure
- Corrosion, UV, and weather resistant
- Low maintenance and long service life
- Customisable sizes and designs
- Quick and easy installation

Applications:

- Residential parking areas
- Commercial and office complexes
- Industrial and public parking zones

GRP INFRASTRUCTURE

Our GRP (Glass Reinforced Plastic) infrastructure solutions are engineered for long-lasting performance in demanding industrial, commercial, and municipal environments. Made with advanced composite technology, GRP offers high strength-to-weight ratio, corrosion resistance, and design flexibility, making it a superior alternative to steel, concrete, and wood. Manufactured using processes like filament winding, pultrusion, and hand lay-up, these products ensure consistent quality, structural integrity, and durability. With excellent weather and UV resistance and non-conductive properties, GRP is ideal for outdoor and industrial applications. Widely used in water treatment plants, sewage systems, industrial facilities, marine environments, and transportation projects, GRP provides a cost-effective, low-maintenance, and long-lasting solution for modern infrastructure.

❖ GRP LINER

- GRP liners and benchings are corrosion-resistant, lightweight, and manufactured to high-quality standards. They protect underground structures like manholes, chambers, and pipelines from corrosion and chemical damage. Produced using filament winding or hand lay-up processes, they ensure precision, strength, and durability.
- **Specifications:**
- **Diameter:** 600 mm – 3000 mm
- **Length:** Up to 12 m (customizable)
- **Material:** Thermosetting resin + glass fiber reinforcement
- **Components:** Liner shafts, benching units, cover slabs, gully ports, ladders, handrails
- **Surface:** Smooth internal finish; optional anti-slip coating
- **Benefits:**
- Highly durable and chemical-resistant
- Lightweight for easy installation
- Customizable for various sizes and configurations
- Cost-effective with reduced maintenance and long service life
- **Applications:**
- Sewerage and drainage systems
- Stormwater management
- Manholes and inspection chambers
- Industrial effluent systems
- Wastewater treatment plants
- Underground utility structures

❖ GRP SHUTTER MOLD

GRP (Glass Reinforced Plastic) Shutter Molds are specially designed tools

used for casting and shaping concrete shutters with precision and consistency. Our GRP Shutter Molds are engineered to deliver exceptional precision, durability, and efficiency for modern construction and precast applications. Manufactured using high-quality Glass Reinforced Plastic, these Molds offer a smooth finish, excellent dimensional stability, and long service life. They help improve productivity while maintaining high-quality output, ultimately reducing project time and cost. With minimal maintenance requirements and excellent durability

FEATURES

- **Corrosion & Moisture Resistant:** Does not rust or absorb water like metal or wood
- **Smooth Surface Finish:** Provides excellent finish to concrete, reducing additional finishing work
- **Dimensional Accuracy:** Ensures uniform shape and size in every casting
- **Reusable & Cost-Effective:** Long service life makes it economical for large projects
- **High Strength & Durability:** Withstands repeated use without damage or deformation

TYPES OF GRP SHUTTER MOLDS

- **Wall Panel Molds:** For casting concrete wall sections
- **Column & Beam Molds:** Used for structural components
- **Drain & Channel Molds:** For water drainage systems
- **Custom Molds:** Designed as per specific project requirements
- **Decorative Pattern Molds:** For aesthetic concrete finishes

APPLICATIONS

GRP shutter Molds are widely used in:

- Precast concrete manufacturing
- Infrastructure and civil construction projects
- Drainage channels and cable trenches
- Boundary walls and panels

- Road and highway components
- Industrial and commercial construction works